

THE CITY OF CALGARY  
PLANNING DEPARTMENT

# RIVERBEND

area structure plan





The Blue Pages of this document contain supporting information and do not form part of the bylaw.

For purposes of electronic publications the Background Pages are identified by the footer "Riverbend Area Structure Plan - Background Information".

**Office Consolidation  
2006 October**

# **Riverbend Area Structure Plan**

**Bylaw 12P79**

**Approved October 23, 1979**

Note: This office consolidation includes the following amending Bylaws:

<b>Amendment</b>	<b>Bylaw</b>	<b>Description</b>	<b>Date</b>
1	5P82	a. Section 2.2 – Revise wording (superceded by 11P90) b. Map 2 – Replace (superceded by 11P90, 6P92, 20P99) c. Section 2.3 – Revise wording d. Section 2.3 – Revise wording e. Section 2.5 Revise wording f. Section 2.5 – Delete paragraph	1982 February 16
2	24P83	a. Page i – Delete section, replace with new section	1983 September 26
3	11P90	a. Map 2 – Replace (superceded by 6P92, 20P99) b. Section 1.4.6 – Add new section c. Section 2.2 – Delete text d. Section 2.5 – Deleted section, renumber subsequent sections	1990 June 25
4	6P92	a. Map 2 – Replace (superceded by 20P99) b. Section 2.4 – Revise wording c. Section 2.4 – Revise wording d. Section 2.4 – Revise wording	1992 April 13
5	16P97	ABANDONED	1997 July 21
5	20P99	a. Map 2 – Replace b. Section 1.2 – Revise numbers c. Section 2.1 – Revise numbers d. Section 2.3 – Revise number	1999 December 6

Amended portions of the text are printed in italics and the specific amending Bylaw is noted.

Persons making use of this consolidation are reminded that it has no legislative sanction, and that amendments have been embodied for ease of reference only. The official Bylaw and amendments thereto are available from the City Clerk and should be consulted when interpreting and applying this Bylaw.

#### **PUBLISHING INFORMATION**

TITLE: RIVERBEND AREA STRUCTURE PLAN 12P79  
AUTHOR: LONG RANGE PLANNING AND RESEARCH DIVISION  
THE CITY OF CALGARY PLANNING DEPARTMENT  
PRINTING DATE: 2006 OCTOBER  
ADDITIONAL COPIES: CITY OF CALGARY #8115  
PLANNING  
INFORMATION CENTRE  
P.O. BOX 2100, STN 'M'  
CALGARY, AB CANADA T2P 2M5  
TEL (403) 268-5333 FAX (403) 268-4615

---

The Riverbend Area Structure Plan was adopted as By-law No. 12P79 on October 23, 1979. Motions carried during Council's consideration of the Bylaw gave rise to the following two additions to the Plan:

1. Notices on Title

"Development agreements for the area of land in the Riverbend Area Structure Plan to be used for residential purposes and within one mile of the boundary of the plant of Western Cooperative Fertilizers Ltd. shall contain a provision requiring the developers to notify purchasers of residential property of the possibility of objectionable emissions by registering a notice on the title to each property in the form contained in the following paragraph.

'This property lies within one mile of the property boundary of the plant of Western Cooperative Fertilizers Ltd. This is a heavy petro chemical industry which may be expanded within its present boundaries at some future date. The emissions from the plant occasionally may be objectionable to some people, notwithstanding that such operations may be within the limits prescribed by law.'

2. Fund for Community Facilities

*City Council supports the objective of establishing a fund for the construction of a community association hall and associated sports facilities in Riverbend by means of a voluntary contribution from developers in the area. Section deleted, new section added. 24P83*

# Table of Contents

	PAGE
<b>1 POLICY CONTEXT FOR DEVELOPMENT IN RIVERBEND .....</b>	<b>2</b>
1.1 INTRODUCTION .....	2
1.2 BOUNDARIES OF THE STUDY AREA .....	2
1.3 EXISTING POLICY FOR THE STUDY AREA .....	3
1.3.1 The Barlow Policy Report .....	3
1.3.2 The Calgary General Municipal Plan .....	3
1.4 FACTORS TO CONSIDER IN THE DEVELOPMENT OF THIS AREA .....	4
1.4.1 Status of Existing Land use in the Area .....	4
1.4.2 Existing Land Use in Adjacent Areas .....	5
1.4.3 Southeast Calgary Air Quality Study.....	7
1.4.4 Transportation Facilities .....	8
1.4.5 Utilities .....	9
1.4.6 The Ogden Dry Disposal Site .....	9

	PAGE
<b>2. LAND USE PLAN .....</b>	<b>10</b>
2.1 INTRODUCTION .....	10
2.2 THE LAND USE COMPONENTS.....	11
2.3 RESIDENTIAL LAND USE .....	13
2.4 COMMERCIAL/OFFICE LAND USE .....	15
2.5 OPEN SPACE AND RESERVE LANDS .....	16
2.5.1 Open Space Areas .....	16
2.5.2 Environmental Reserve .....	16
2.5.3 Municipal/School Reserve .....	19
2.6 TRANSPORTATION .....	20
2.6.1 Area Transportation .....	20
2.6.1.1 Deerfoot/Glenmore Trail.....	20
2.6.1.2 24th Street East.....	20
2.6.2 Internal Transportation Components.....	23
2.6.3 Public Transit.....	24
2.7 UTILITIES.....	24
2.7.1 Sanitary Sewer Service .....	24
2.7.2 Storm Sewers .....	25
2.7.3 Water .....	25
2.7.4 Natural Gas.....	27
2.7.5 Telephones .....	27
2.7.6 Electric Service.....	27

## Table of Contents

### Continued

	PAGE
2.8 COMMUNITY SERVICES .....	29
2.9 SEQUENCE OF DEVELOPMENT .....	30
<b>3. BACKGROUND INFORMATION .....</b>	<b>31</b>
3.1 AREA ENVIRONMENTAL FACTORS.....	31
3.1.1 Topographic Areas .....	31
3.1.2 Vegetation .....	31
3.1.3 Views .....	33
3.2 COMMUNITY SERVICES .....	34
3.2.1 Decentralized City Services.....	34
3.2.2 Police Service .....	34
3.2.3 Fire Service .....	35
3.2.4 Library.....	35
3.2.5 Local Board of Health .....	36
3.2.6 Social Services .....	36
3.2.6.1 Pre-School .....	37
3.2.6.2 School and Teenage Programs .....	37
3.2.6.3 Adult Programs .....	37
3.2.7 Educational Facilities .....	37
3.3 OUTLINE PLAN REQUIREMENTS.....	38

	PAGE
<b>LIST OF MAPS</b>	
Map 1 Location Map.....	1
Map 2 Land Use Map.....	12
Map 3 Area Transportation.....	22
Map 4 Sanitary and Storm Sewers and Water .....	26
Map 5 Natural Gas and Electrical Service .....	28
Map 6 Area Environmental Factors.....	32

MAP  
No  
**1**

# RIVERBEND

TITLE

LOCATION MAP

## LEGEND



Study Area

DATE October, 1979

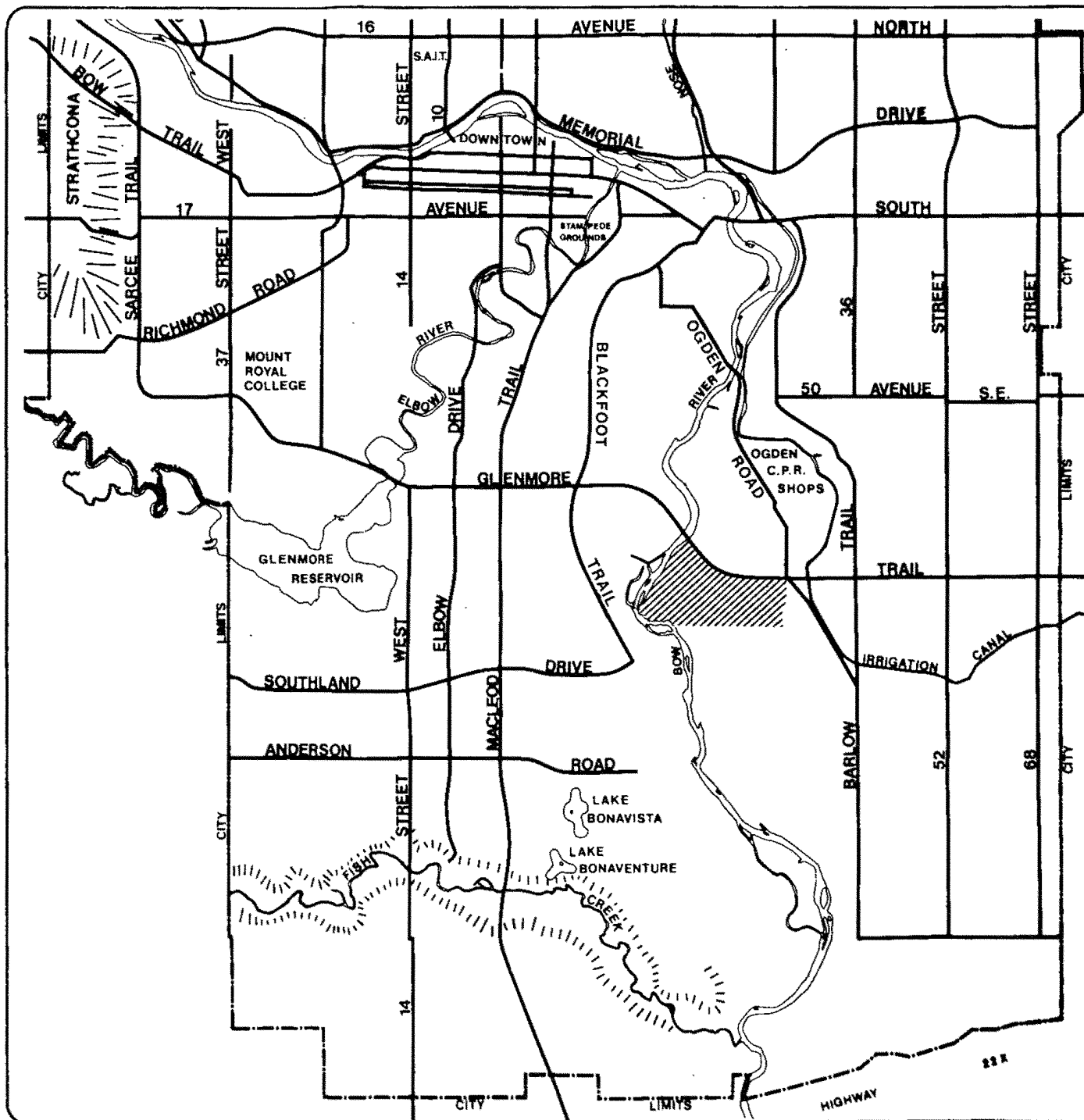
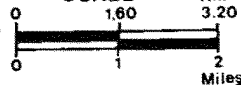
Approved Copy



THE CITY OF CALGARY  
PLANNING DEPARTMENT



SCALE





# 1 POLICY CONTEXT FOR DEVELOPMENT IN RIVERBEND

## 1.1 INTRODUCTION

In March 1979, City Council adopted the Calgary General Municipal Plan. This Plan called for a population of about 6,000 to be accommodated in an area south of Ogden, known generally as the Barlow Sector. This decision supersedes the Barlow Policy Report prepared in 1973, which noted this area as “subject to policy constraints.” A new policy report is proposed for the whole southeast area of the city, south of 17th Avenue and east of the Bow River, for completion in 1980. However, because of the increasing demand for residential development in the city and to promote major policies in the Calgary Plan, City Council instructed the Planning Department to prepare an area structure plan for Riverbend prior to the Southeast Policy Report. This Area Structure Plan will become a parameter for consideration in the Southeast Policy Report.

## 1.2 BOUNDARIES OF THE STUDY AREA

The boundaries of the Riverbend Area Structure Plan are as follows (see map 1):

- the Glenmore Trail to the north,
- the Bow River to the west,
- 90th Avenue to the south,
- the proposed realignment of 24th Street to the east.

The total area contained within this area is  
*516 acres (213 hectares).*

**20P99**

## **1.3 EXISTING POLICY FOR THE STUDY AREA**

### **1.3.1 The Barlow Policy Report**

The 1973 Barlow Policy Report, with subsequent approved amendments to 1975, calls for a mixture of light and heavy industrial uses in the area south of Glenmore Trail, north of then Anderson Road alignment and west of Barlow Trail, with portions of land along the Bow River designated as park and open space. That portion of land south of Glenmore Trail and north of 90th Avenue south was, and still is designated as “subject to policy constraints”. Council determined that no industrial development would be permitted north of 90th Avenue prior to 1985. The residential area known as South Hill

(within the area north of 90th Avenue) was to be gradually phased out through acquisitions by the City (40 – 50% of the area has been acquired). The area was to change to industrial use after 1985.

### **1.3.2 The Calgary General Municipal Plan**

The 1979 Calgary General Municipal Plan distributes approximately 6,000 people to the Barlow Area to be accommodated on land that is presently occupied by, or adjacent to, gravel pits. This area lies approximately within that area noted as “subject to constraints” in the Barlow Policy Report area.

---

## **1.4 FACTORS TO CONSIDER IN THE DEVELOPMENT OF THIS AREA**

### **1.4.1 Status of Existing Land Use in the Area**

The only land uses associated with most of the subject area are worked out gravel pits, a small portion of the “South Hill” residential area and a considerable portion of land purchased by the City for park purposes along the Bow River. The gravel extraction activities ceased operation on December 31, 1978. The licences for gravel extraction operations include conditions with respect to backfilling standards. Industrial standards require that backfilling be completed to the level of storm and sanitary lines in the area. Residential

standards, which will apply in this area, require about four feet above industrial standards. Large amounts of fill are now being taken from an area towards the west in the study area. Much more fill is required and may be taken from higher portions of land in Riverbend. The community of South Hill is in the process of being phased out as a result of policies in the Barlow Policy Report. The City-owned park along the Bow River is incorporated as part of the design for the Area Structure Plan area.

### **1.4.2 Existing Land use in Adjacent Areas**

Following the annexation of land in the southeast of the city in 1961, that area has been thought of predominantly in industrial terms. The 1973 General Plan outlined as industrial land a large portion of the area already being used by heavy industries with extensive land requirements, mostly east of Riverbend. About one mile northwest of Riverbend, across the Bow River, is more heavy industry; most notable is the Cominco Ltd. fertilizer plant. It is an older plant whose only constraint upon Riverbend is one of visual intrusion.

Immediately east of Riverbend is the remaining portion of the South Hill residential area, some industry and a recently approved 110 site mobile home park. Immediately south of Riverbend are gravel extraction and crushing industries which

have licences to operate well into the 1980's. There is some noise and dust associated with these plants which will need consideration in determining the timing or extent of development in Riverbend. North of Riverbend is the existing community of Ogden, an older community with some recent development activity. Schools and other public services in this area must be considered when establishing land use in Riverbend.

An area structure plan is being prepared for the McKenzie area, about three miles south of Riverbend for about 20,000 people, also adjacent to the Bow River. One is also under preparation for an area between McKenzie and Riverbend, along the Bow River.



---

Before proceeding with the Land Use Plan, several assumptions which may aid in land use decisions are made here with respect to the surrounding uses:

1. There is no specific civic policy regarding the interface between residential and industrial uses in relatively close proximity to each other nor is there likely to be before development starts in Riverbend.
2. The industry in the immediate area will remain through the life of the community (i.e. Cominco and Western Co-operative Fertilizer Plants. The Standard General's gravel crushing operation is likely to remain for at least five more years).
3. Residential development east of the Bow River will likely carry on south of Riverbend in a linear form down to the McKenzie area.  
  
Further, a large part of the area recently annexed to the city in the extreme southeast, east of McKenzie, will probably be developed residentially as well. This large population (50,000 or more) for four or five miles south of Riverbend suggests that such things as large regional service centres, decentralized city services and other community services may be located south of Riverbend.
4. In the short term, Riverbend may depend upon Ogden for some of its services. Eventually, however, the study area may associate more closely with development to the south of it.

All these adjacent area uses and possible future uses suggest that this is a complex area to develop and that particular care must be taken in its development. It should be designed so as to fit well with possible development immediately to the south and to fit in with what may eventually be a very large and somewhat isolated residential area in Southeast Calgary.

#### **1.4.3 Southeast Calgary Air Quality Study**

An air quality study prepared by consultants for the City of Calgary in 1978/79, discussed air quality in Calgary in general and more specifically, in the southeast area of the city. Their report suggests that air quality in the southeast presents little problem to residential development in the study area.

The impact of any industrial pollution that does occur in the study area is minimal. While emission

standards may occasionally not be met by industry in the nearby area, the standards are only marginally exceeded. As well, these emissions need to be coupled with particular wind patterns to be a problem in Riverbend. This combined situation occurs about 0.1% of the time.

New environmental standards for industrial emissions expected to be in force by 1981, are not expected to make any impact on present emissions, but will have an impact on any new emissions created by new industrial operations or extensions to old ones.

The impact of traffic and residential pollutants at present is of course almost negligible. Estimates of future populations and traffic in this area and ten other areas of the city over the next ten years indicate that the air quality in residential portions of the southeast will be no worse, and in a lot of cases better, than in other areas considered.

The combined impact on the air quality of industrial, traffic and residential pollution is difficult to estimate, although given the rather small impact of them in the area now and in the projected future, it is anticipated that this too will be minimal.

#### **1.4.4 Transportation Facilities**

The principal components of the transportation system serving this area are:

- Deerfoot Trail – proposed for completion from 17 Avenue to Glenmore Trail in 1980 and to Highway 901 by 1984.
- 24th Street S.E. – proposed upgrading to major street status to tie in with the Glenmore Trail/Ogden Road interchange, both to be staged and constructed as the need arises.
- 18th Street S.E./Glenmore Trail interchange – slated for completion post 1987, to be reviewed

in light of any development proposals for earlier constructions.

- 18 Street East – to be constructed as development proceeds.

Development within the study area in the next few years would require consideration of either of the last two facilities. Further, regardless of the area available for development and the capacity available on Deerfoot Trail, the downstream improvements to the transportation system (in this case, Memorial Drive improvements) can only handle a certain amount of traffic.

Population growth scheduled for the McKenzie and Calgary North areas which share these downstream facilities, constrain the population level in Riverbend at this time to near the 6,000 population level approved by Council through the Calgary Plan. In fact, this level has been somewhat exceeded for reasons documented in part 2.3 “Residential Land Use”.

#### 1.4.5 Utilities

The provision of water, storm and sanitary sewer services to the area is not seen as a problem although each has a limit which constrains potential residential growth in the southeast. These are noted below inasmuch as the limits on growth imposed by these utilities may influence the form of development in the study area.

- a) Water – there is capacity in the feeder main located on Glenmore Trail – 78th Avenue S.E. to service the study area. As development proceeds to the south, additional support from a proposed feeder main crossing the Bow River in the vicinity of Anderson Road – 114th Avenue S.E. will be required.
- b) Storm sewers – storm sewers discharge to the west of the divide mentioned above could be accommodated by outfalls into the Bow River, although some improvements will be needed to accommodate full development in that area.

Approval of locations for these outfalls must be obtained from Alberta Environment and the City of Calgary.

- c) Sanitary Sewers – The study area and a considerable area south of it down to the approximate east-west alignment of the Deerfoot Trail can be served by an existing 72” sanitary trunk to the Fish Creek Sewage Treatment Plant.

#### 1.4.6 The Ogden Dry Disposal Site

*This landfill site is located southeast of Riverbend and is used for the disposal of construction rubble and similar inert non sanitary materials. The Approving Authority shall ensure that the requirements of the Public Health Act and Planning Act Subdivision Regulation, pertaining to the spacing of developments near landfill sites, are met unless all necessary waivers are granted to allow development to proceed.*

**11P90**



---

## 2 LAND USE PLAN

### 2.1 INTRODUCTION

The Riverbend Area Structure Plan encompasses an area of about *516 acres (213 hectares)*. **20P99**

Much of the developable portion is owned by two landowners. The area is approximately 7.2 miles (11.6 kilometres) from Downtown Calgary. With many new communities developing ten or more miles from city centre, the location of Riverbend makes it practical and desirable for commuters to Downtown. Coupled with this is the excellent transportation system in place and proposed in the southeast which increases accessibility from Riverbend to many parts of the City. Both these factors should make Riverbend a desirable residential area.

Many of the surrounding industrial and gravel extractive transitional uses, plus the existing state of the land in the study area combine to make this a fairly unattractive site. A great challenge exists, therefore, to take this land and creatively develop it for residential purposes. The developer must take care to separate the site from the unattractive elements of its surrounding environment. To do

this, it is suggested that care be taken to utilize the site's best features, namely the views to the mountains and the proximity to the Bow River and large open spaces associated with it. Areas most important for sensitive design are those on the edges of Riverbend; the north along Glenmore Trail and the east along the edge of industry in particular. In these areas the developer may wish to orient the neighbourhood inward by means of reshaping the topography of the area or through the provision of an inward focus (e.g. open space through the middle of the community). The southern edge presently presents a potential conflict between residential development and operating gravel extraction and crushing operations south of it. However, possible residential development further south in the future and the desirability of maintaining views to the southwest suggest that this conflict may be temporary. While the site may present difficulties to the developer then, it is imperative that the developer and the City work out a design that attempts to eliminate the undesirable aspects of the site and take best advantage of the good points.

It is not expected that residential development in this area will present any problem to the operation of existing industries; Ogden has existed harmoniously beside industry for many decades. Further, as noted earlier on, industry presents no air quality problems to residential development either.

It should be remembered in all of this that the area is presently somewhat isolated in that residential development in any concentrated form only exists north in the existing Ogden community. Possible future development further south may constitute a population which together with that of Riverbend's is of a size that warrants treating the entire residential area south of Glenmore Trail as one for community servicing purposes. Therefore, some facilities planned for Riverbend should be considered in light of the potential larger population in the southeast area (e.g. commercial and office facilities). Other facilities may not be easily accessible to Riverbend until further residential

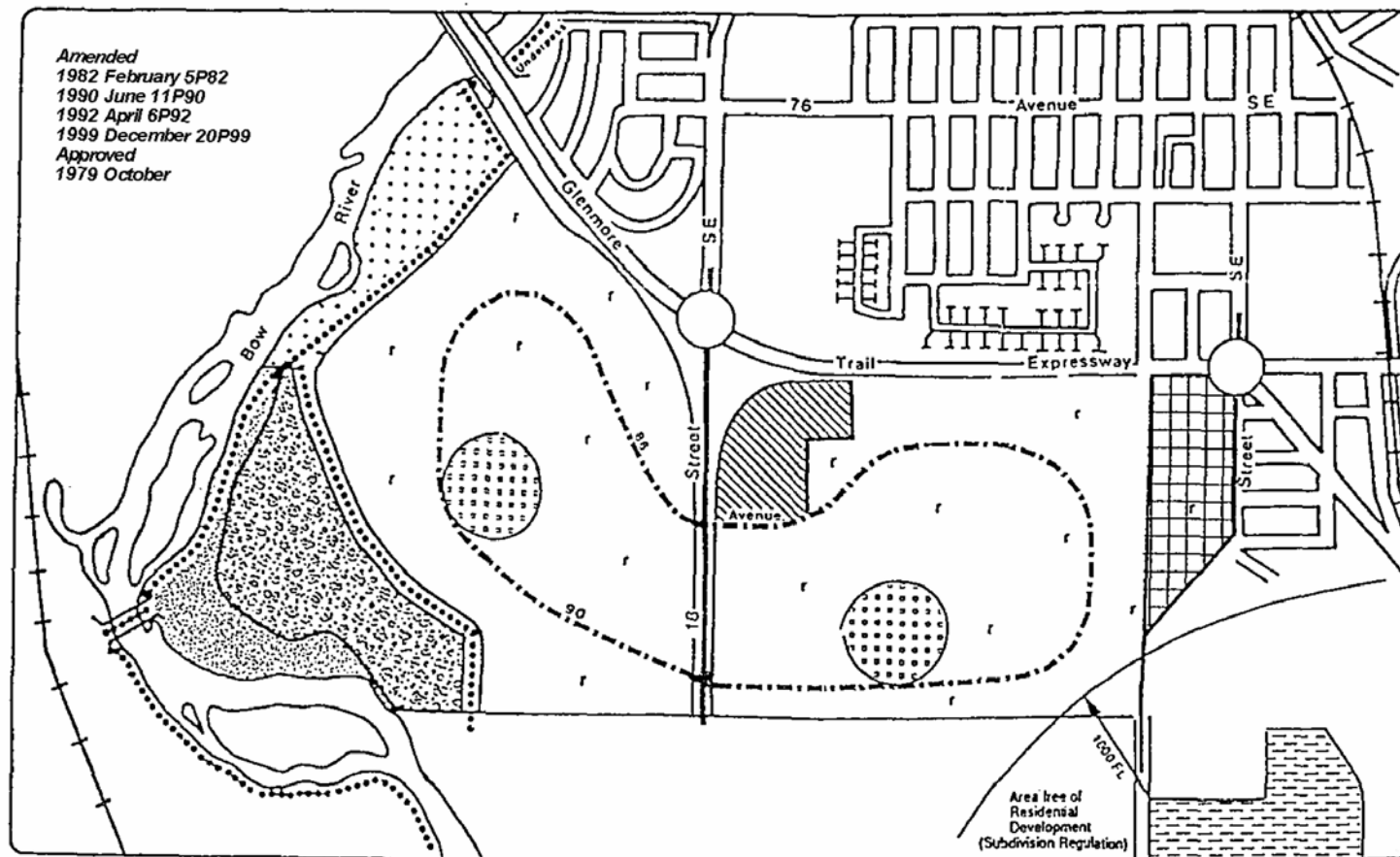
development south of it becomes a reality (e.g. social services).

## **2.2 THE LAND USE COMPONENTS**

The land use plan calls for a predominately residential use for this area, suburban in nature. The commercial/office component will act as a focus at the entrance to the area and as a buffer between residential areas and Glenmore Trail to the north (see map 2 – Land Use Plan). This use will be sized to serve the residential population in Riverbend and possibly for some of the potential residential component to the south of the study area in the case of the commercial component and the southeast population in general in terms of the office component. While environmental and municipal reserve are to be dedicated in accordance with City policy, the area is also served by a large City owned open space to the west along the Bow River, known as Carburn Park.

*(5P82 sentences deleted, 11P90)*

Amended  
 1982 February 5P82  
 1990 June 11P90  
 1992 April 6P92  
 1999 December 20P99  
 Approved  
 1979 October



RIVERBEND MAP NO 2

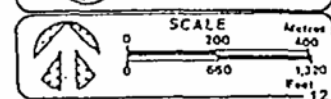
TITLE  
 LAND USE

LEGEND

- Residential
- Commercial/Office Consolidation
- Approximate Municipal/School Resource
- Potential Environmental Reserves
- Provincially Owned Land
- Carburn Park
- Possible Pedestrian/Bicycle Path System
- Possible Foot Bridge
- Dry Disposal Site
- Removed from Riverbend A.S.P. And Incorporated into the Millican-Ogden Community

Amended 1999 December 20P99  
 (see top left corner)

THE CITY OF CALGARY  
 PLANNING DEPARTMENT



## 2.3 RESIDENTIAL LAND USE

Approximately 516 gross acres of land are designated on the Land Use Plan (see Map 2) for residential and associated uses (reserve lands, roads, utilities, local commercial and office areas and institutional). **20P99**

The distribution of residential densities within this area will be finalized at the Outline Plan stage. Given the special conditions affecting the design and layout of the area suggested in the Introduction (paragraph 2.1), the policy of the Calgary Plan which allows for variable densities among newly developing areas of the city may be particularly useful in designing this area.

Given the excellent access from this area from both the Downtown and the southeast employment areas, there is a potential demand for a variety of housing types. This variety is one that is also encouraged through the Calgary Plan. The Plan also provides for other than the standard densities of 22 person per acre in new areas. Because of the greater volume of traffic generated by higher

densities it is suggested that these uses be kept near the major streets of the community, although higher density accommodation should not dominate any one area of the community.

While Carburn Park is not intended to be the sole domain of Riverbend residents, it is a feature that could be enlarged upon in developing the area. For example, perhaps more people should have direct views and access to it than would be the case if only single family units predominated on the escarpment areas. Therefore, it is recommended that where possible, without creating a barrier to park access, higher densities be mixed with single family houses on the edge of Carburn Park.

Cluster housing and townhousing types of units allow for more flexibility in site design. In addition, features that ameliorate unpleasant views or noises (berms, sound attenuated fences, housing design) are more financially feasible within higher density development. It is recommended, therefore, that these densities be considered on the eastern edge of Riverbend to avoid conflict with land uses to the east.



---

The view to the mountains may make it possible to examine smaller lot sizes and zero lot line developments without any perceptual crowding.

There seems to be a potential then, for many areas of higher than normal densities. This does not mean, however, that overall densities will necessarily be much more than the standard 22 persons per acre asked for in many other new areas. It does mean that the potential is there and that the City should be willing to exceed normal densities if site conditions warrant it.

***5P82, Paragraphs deleted, 11P90***

The area west of 18 Street is slightly larger than the east cell. The City-owned Carburn Park and the environmental reserve are excluded from the density calculations here. This leaves about 243 acres (100 hectares) of developable land in the western cell capable of supporting a population of about 5,300. The total population suggested for Riverbend is between 9,100 and 9,700 people.

Therefore, the 6000 population distributed to this area through the Calgary Plan (determined in large part by the capacity of the transportation system) may be exceeded.

*Residential development abutting Glenmore Trail or 24 Street S.E., shall be protected from excessive traffic noise and vehicle air pollution by the provision of deeper than normal lots, berms and sound attenuation fencing to the satisfaction of the Approving Authority.*

**11P90**

## 2.4 COMMERCIAL / OFFICE LAND USE

A market analysis has been made available to the City which determines the extent and need for commercial facilities and office facilities in this area. The results suggest that the commercial component of Riverbend may serve the needs of the area itself, a specialized demand associated with large volumes of industrial and commercial traffic on Glenmore Trail and, to some extent, the potential population south of Riverbend. Coupled with the need for shopping facilities is the need for free-standing facilities such as a service station, bank, coffee shop and fast food outlets. Together, these suggest a site of about 8.0 net acres (3.2 hectares). **6P92** There is a growing office market in suburban areas in Calgary. There is also an inclination for this office demand to be located adjacent to residential areas rather than in the midst of industry. It is felt that this area could well

support a small office component to complement the adjacent industrial uses, both as a service to them and as more attractive sitings for corporation administrative offices. This is consistent with the decentralization policies of the Calgary Plan. This demand is expected to be healthy enough to require about 15.3 acres (6.2 hectares). **6P92** This brings a total acreage for the commercial/office site to about 23.3 net acres (9.4 hectares). **6P92**

There are nearby commercial facilities in Ogden which, as mentioned earlier, may provide a service to Riverbend as the area develops. However, the Ogden facilities are sized to serve just that population and none of the Ogden facilities will offer the level of service envisaged in this component of Riverbend. Neighbourhood commercial facilities (i.e. local convenience stores) will be permitted as required.

---

5P82, *Section deleted*

**11P90**

## **2.5 OPEN SPACE AND RESERVE LANDS**

### **2.5.1 Open Space**

The most significant feature in the Riverbend area is the Bow River Valley. The open space afforded to the area because of its relationship to the river will become the focus of the open space system.

Many of the open space policies in the Calgary General Municipal Plan and the Parks/Recreation Policy Statement and Planning Recommendations affect the Riverbend area. These policies deal with preservation of important natural features, development setbacks, continuation of trail development throughout the city and the preservation of undeveloped major escarpments. Implementation of those policies in the Riverbend area will result in:

- i) a 52 acre (21 hectares) City-owned park adjacent to the Bow River being developed. Plans for the area, named Carburn Park, are presently being prepared by the Parks/ Recreation Department in conjunction with the Calgary River Management Advisory Committee (see Map 2).

- ii) a pedestrian/bicycle path system connecting Riverbend to other major open spaces. The path system will link Riverbend, Carburn Park and land on the west side of the river.

- iii) a 60 foot setback zone from the top of the Bow River escarpment.

- iv) a 200 foot setback zone from the banks of the Bow River.

### **2.5.2 Environmental Reserve**

The Planning Act, 1977 Section 95 allows the municipality to require land that is undevelopable in its natural state to be dedicated as environmental reserve. The Planning and Parks Departments have completed a report which consolidates and expands on City policies respecting environmental reserve dedication. In the Riverbend area, the environmental reserve provisions of The Act and the guidelines in the policy report would apply to:

- i) major slopes in association with the Bow River Valley.



- ii) land lying between the stability limit as determined by a soils report and the top of the slope.
- iii) the floodway district of the Bow River as determined by hydrological tests.
- iv) a strip of land abutting the bed and shore of the Bow River from the high water level to the top of the bank plus 10 feet thereafter. Where, in the opinion of the Calgary Planning Commission, a greater distance from the river than outlined above is required to protect the hydrological feature or to provide reasonable public access to it, a wider strip of land may be required as environmental reserve.

- v) the relatively undisturbed unique tree cover on the slopes of the Bow River in the northwest portion of the study area.

- viii) the waterfowl habitats along the Bow River.

The potential environmental reserve areas are shown on Map 2; Land Use. The precise boundaries of the environmental reserves will be determined at the Outline Plan stage.

The existing escarpment east of the lagoon to the north is designated on the Land Use Map as potential future environmental reserve. Consideration will be given to regrading this area only to the extent necessary to provide fill material required to meet residential backfill standards on the rest of the site. However, as noted above, the mature and unique tree cover on that slope should be preserved as environmental reserve.

The escarpment east of Carburn Park, while of a size and steepness to warrant slope analysis, is much less significant in terms of environmental importance than the steeper escarpment to the north. Much of this escarpment will be regraded to provide fill for the worked out areas. This will result in more land being made available for residential development or the extension of Carburn Park. The precise boundary will be determined at the outline plan stage. It is designated as possible future environmental reserve for the time being until the backfilling operations are completed and acceptable plans for regrading the resulting escarpment are submitted at the Outline Plan stage.

Prior to the regrading taking place, a groundwater study should be undertaken to determine the effects of modifications to the escarpment on the groundwater regime of the area.

However, a clear delineation must be retained between the residential component of Riverbend and Carburn Park such that the park is not seen as the extended backyard of those living along the escarpment. Even so, the park is one of the few focal points in this area, so relationships must be explored and views and access to it should not be hampered.

---

### **2.5.3 Municipal/School Reserve**

The Planning Act requires that a maximum of 10% of land being subdivided shall be dedicated to the municipality for municipal and school reserve. In the case of Riverbend, this amounts to about 43 acres (17.1 hectares). The Joint Use Sites Committee has indicated a need for 2 public elementary school sites of 8 to 9 acres minimum.

A central community facility site will be required as part of a larger joint use site within the development proposal south of Riverbend.

## **2.6 TRANSPORTATION**

### **2.6.1 Area Transportation System (see Map 3)**

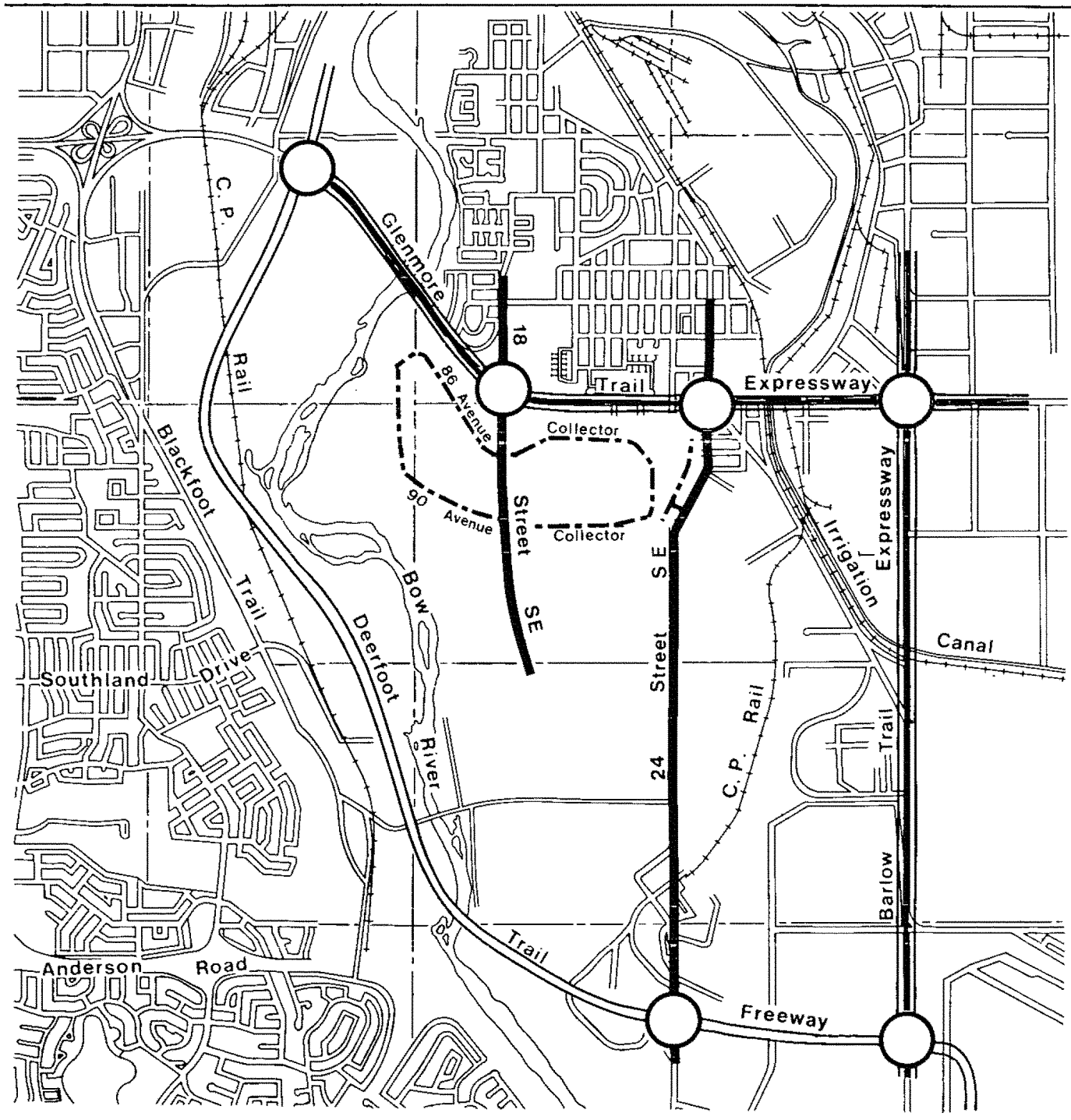
#### **2.6.1.1 Deerfoot/Glenmore Trail**

The portion of Deerfoot Trail south to Glenmore Trail is slated for completion as a six-lane freeway by 1980. Access to Downtown from Deerfoot Trail via Memorial Drive constrains the population in the Southeast to 30,000, about 6000 of which have been allocated to Riverbend.

As part of the overall Deerfoot Trail functional system, Glenmore Trail will be upgraded between 18th Street East and Barlow Trail. Glenmore Trail will act as the main access to other parts of the city for Riverbend residents.

#### **2.6.1.2 24th Street East**

The realignment of 24th Street East (shown in Map 3) as a major street and the construction of the interchange at Glenmore Trail and 24th Street Southeast will occur as traffic volumes warrant it. Provision must therefore be made for it in the area structure plan, although no timing for it is as yet determined. Twenty-fourth Street will be the major access facility for the light industry in the southeast, including the office/warehousing component of Riverbend. This facility will function primarily for industrial traffic uses.



**RIVERBEND**

MAP No  
**3**

TITLE    AREA  
 TRANSPORTATION  
 SYSTEM

LEGEND
 

- Collector
- Major Road
- === Expressway
- == Freeway
- Interchange

DATE: October, 1979  
 Approved Copy

THE CITY OF CALGARY  
 PLANNING DEPARTMENT

SCALE
 

0    0.40    0.80  
 0    0.25    0.50  
 Mile

## **2.6.2 Internal Transportation Components**

The construction of 18th Street East as a major street again will occur as development takes place in the area. The intersection of 18th Street East and Glenmore Trail will be controlled by lights until the traffic warrants the construction of an interchange. The ultimate population proposed for Riverbend plus possible considerable residential development to the south could be handled by the 18th Street east major. It may be possible to decrease 18th Street to a primary collector status south of Riverbend depending on the density of development.

The 18th Street East major is planned as the transportation spine for Riverbend and subsequent development south to Deerfoot Trail (see Map 3).

Access to it in the study area will be primarily from one collector loop east and one west off 18th Street starting at about 86th Avenue South and ending at about 90th Avenue South (see Map 3). Access to all of the residential component of Riverbend will be off these collectors.

Access to the commercial/office sector in the north of Riverbend will be via a double left lane access onto the 86th Avenue primary collector stub to the east of 18th Street. Access to the warehouse buffer to the west of the eastern cell will be via an industrial standard street off Shepard Road Southeast for the present and eventually the realigned 24th Street East major.



Access to the major park area in the River Valley to the west of the area will be through the 90th Avenue end of the west collector.

The collector status of each of the access points to these facilities may need to be upgraded to a primary collector stub status to handle the extra traffic likely to be using a short part of the collector. This can be determined at the Outline Plan stage.

### **2.6.3 Public Transit**

The development of transit service in Riverbend will be staged in relation to development in the southeast area as a whole.

Initially, feeder bus systems will extend to the area from Macleod Trail. Eventually this system will access to the LRT Station at 61st Avenue. Transit service will be provided as soon as the population in Riverbend reaches about 1500.

## **2.7 UTILITIES**

As noted earlier, utilities to this area require no new major headworks and would be extensions of systems now in place. Much of this has to do with the fact that services already in place pass through or into the area are capable of servicing an area west of the drainage divide (to the east of Riverbend) and south for a few miles. Each utility is discussed below (see Map 4).

### **2.7.1 Sanitary Sewer Service**

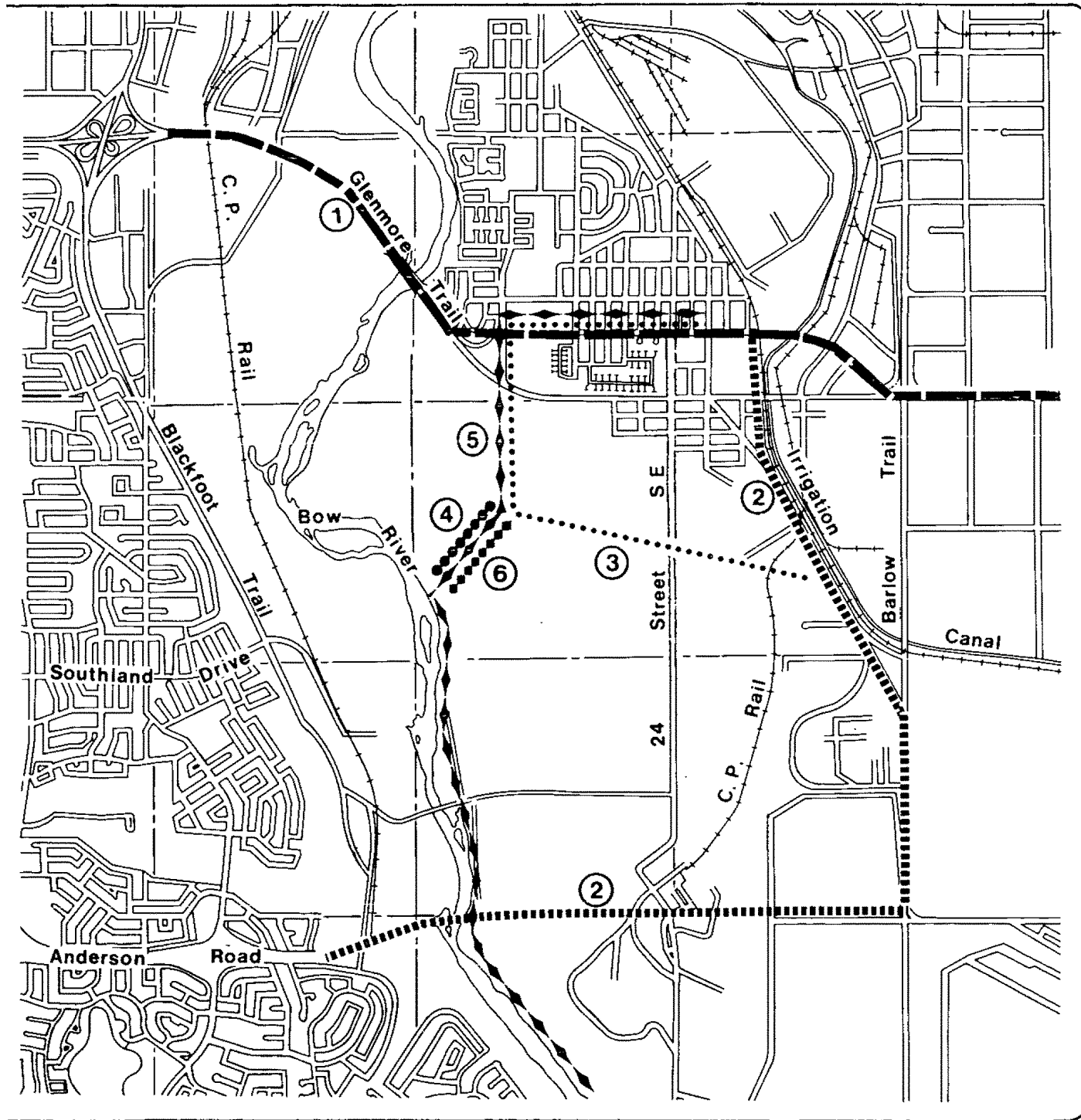
Sanitary sewage from Riverbend will be carried to the Fish Creek Sewage Treatment Plant via a sanitary trunk which traverses the area the east side of the Bow River (see Map 4). This trunk now follows the proposed 18th Street East alignment through Riverbend, so no alternative rights-of-way would be required. Any improvements to this system will be made as development demands.

### **2.7.2 Storm Sewers**

Like the sanitary sewer system, a storm sewer system already exists in the study area. At present, it follows the same alignment through Riverbend where the storm ditch now angles off to the southeast and drains into the Bow River further south. With development in Riverbend, this system would be changed such that it flows instead into the Bow River, following the Sanitary Trunk Line to the River (see Map 4).

### **2.7.3 Water**

The Riverbend area developers will be responsible for extending the distribution system south from the feeder main, as development occurs. The final locations of water mains will be dependent upon the street pattern developed.



# RIVERBEND

MAP  
No  
4

TITLE UTILITIES  
WATER MAINS  
STORM AND  
SANITARY SEWERS

## LEGEND

### WATER MAINS

- ① Existing 42" Feeder Mains
- ② Proposed 36" Feeder Mains

### STORM SEWERS

- ③ Existing 72" Storm Sewer
- ④ Proposed 84" Storm Sewer

### SANITARY SEWERS

- ⑤ Existing 72" Sanitary Sewer
- ⑥ Proposed Sanitary Sewer

DATE: October, 1979

Approved Copy



THE CITY OF CALGARY  
PLANNING DEPARTMENT



SCALE  
0 0.40 0.80  
0 0.25 0.50  
Km  
Mile

#### **2.7.4 Natural Gas**

Natural gas will be supplied to Riverbend by Canadian Western Natural Gas Company. Service will be brought to the area from their existing 273.1 mm (10") IP Main located at 26th Street and 83rd Ave. S.E. in the northeast corner of Riverbend (see Map 5). Natural gas can be provided by 1980, providing that sufficient lead time is allowed (2 month minimum for distribution mains).

It should be noted that there are two existing 406.4 mm (16") high pressure transmission lines running through this area (see Map 5). These lines are protected by a 15.24 m (50') easement. As well, a 15.25 m (50') building setback is required from all high pressure transmission lines. Any relocation of the transmission lines which may be required will be entirely at the developer's expense.

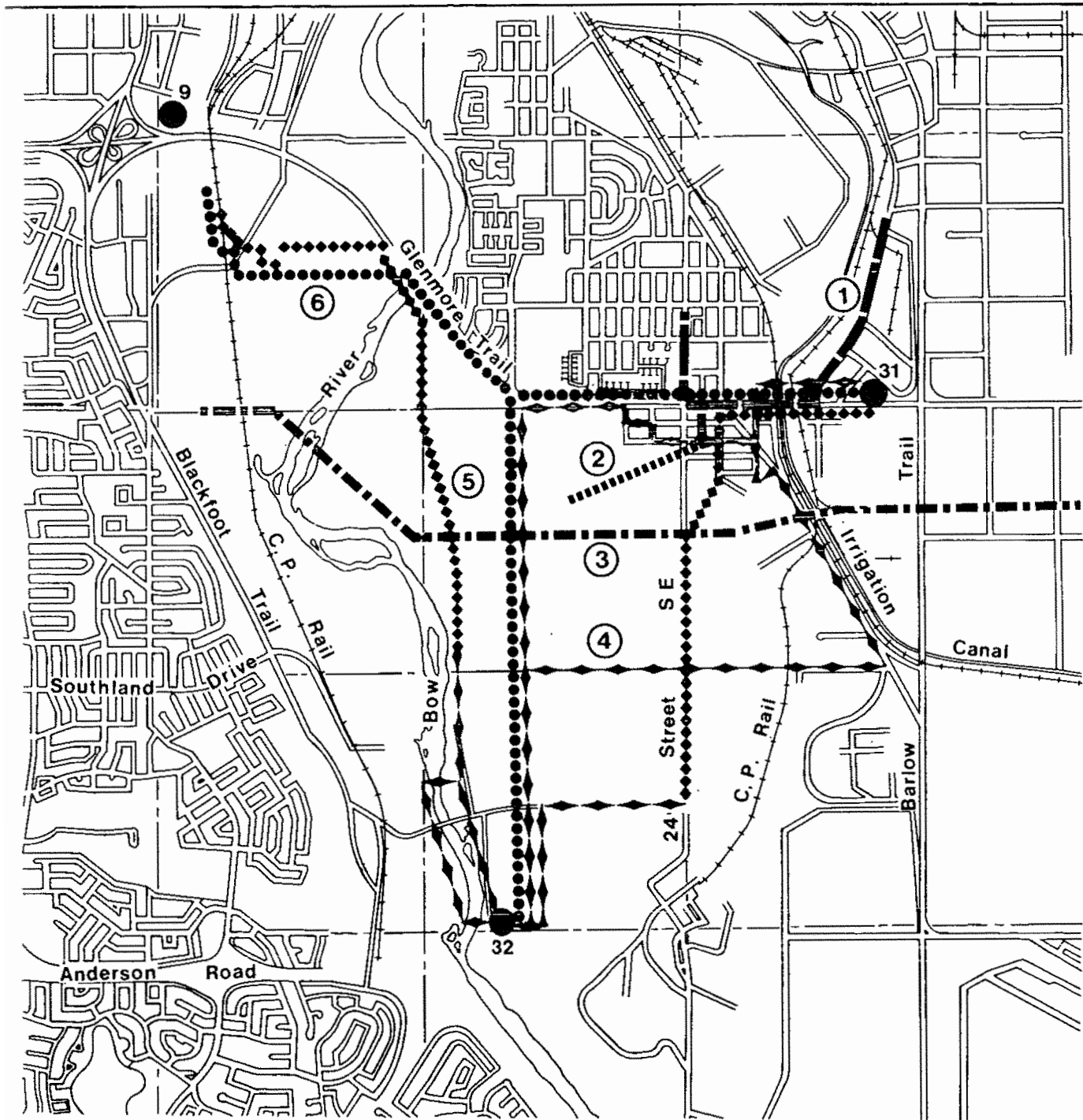
#### **2.7.5 Telephones**

Telephone service to Riverbend will come from the north in the form of an underground conduit located in the widened Barlow Trail alignment. Initially, residents of Riverbend will be part of the Ogden exchange and serviced from its location at 40th Street and 90th Avenue Southeast.

#### **2.7.6 Electric Service**

Electric service to this area will be provided through the City's electric system.

Three 13.2 Kv feeders will be required to service the subdivision. Existing and proposed feeders will run north and south along 24th Street and 18th Street and are fed from substation #31 (see Map 5); another north to south line at about 15th Street will be fed from substation #32.



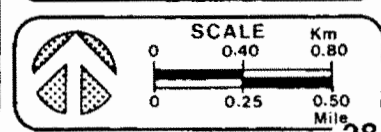
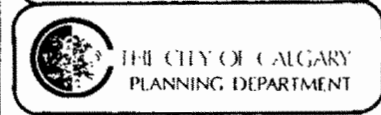
# RIVERBEND

MAP No 5

## TITLE UTILITIES NATURAL GAS AND ELECTRICAL

- LEGEND**
- NATURAL GAS**
- ① Existing Distribution Mains
  - ② Proposed Servicing
  - ③ Existing 406.4 mm. High Pressure Lines
- ELECTRICAL SERVICE**
- ④ Existing 13.2 K.V. Feeders
  - ⑤ Proposed 13.2 K.V. Feeders
  - ⑥ Existing 138 K.V. Overhead Subtransmission
  - Substations

DATE: October, 1979  
Approved Copy



A 138 Kv overhead line exists along Glenmore Trail and along the existing 18th Street. Its present “H” frame type structures are incompatible with residential development and major road rights-of-way. If relocated to single pole structures on the side of the relocated 18th Street, a 30’ blowout easement would be required on the property side of the line. The structures themselves are still somewhat unattractive. There is a possibility of moving this line completely to the 24th Street alignment. The costs of either move would need to be analyzed before a decision is made. Smaller easements are also required for the 13.2 Kv feeders along 24th Street, 18th and 15th Streets.

## **2.8 COMMUNITY SERVICES**

The population envisaged for Riverbend does not warrant the provision of many social services right in the community at the present. Further, until more is known about the ultimate land uses in the southeast, either through the Southeast Policy Report or the Mid-Barlow Area Structure Plan, it is difficult to assign any new social services to the area south of Ogden down to the south city limits. In the interim, in most cases it will be necessary for residents in Riverbend to use existing services in areas around it. These surrounding services are included as background information in Part 3.



---

## **2.9 SEQUENCE OF DEVELOPMENT**

The only constraint to development in Riverbend is the provision of natural gas. To take the best advantage of natural gas servicing, development should proceed from the northeast corner of Riverbend. If the developer wishes to provide alignments and rights-of-way now, however, there are no other servicing constraints and development can proceed in any one or a number of areas at the same time.

### **3 BACKGROUND INFORMATION**

#### **3.1 AREA ENVIRONMENTAL FACTORS (SEE MAP 6)**

##### **3.1.1 Topographic Areas**

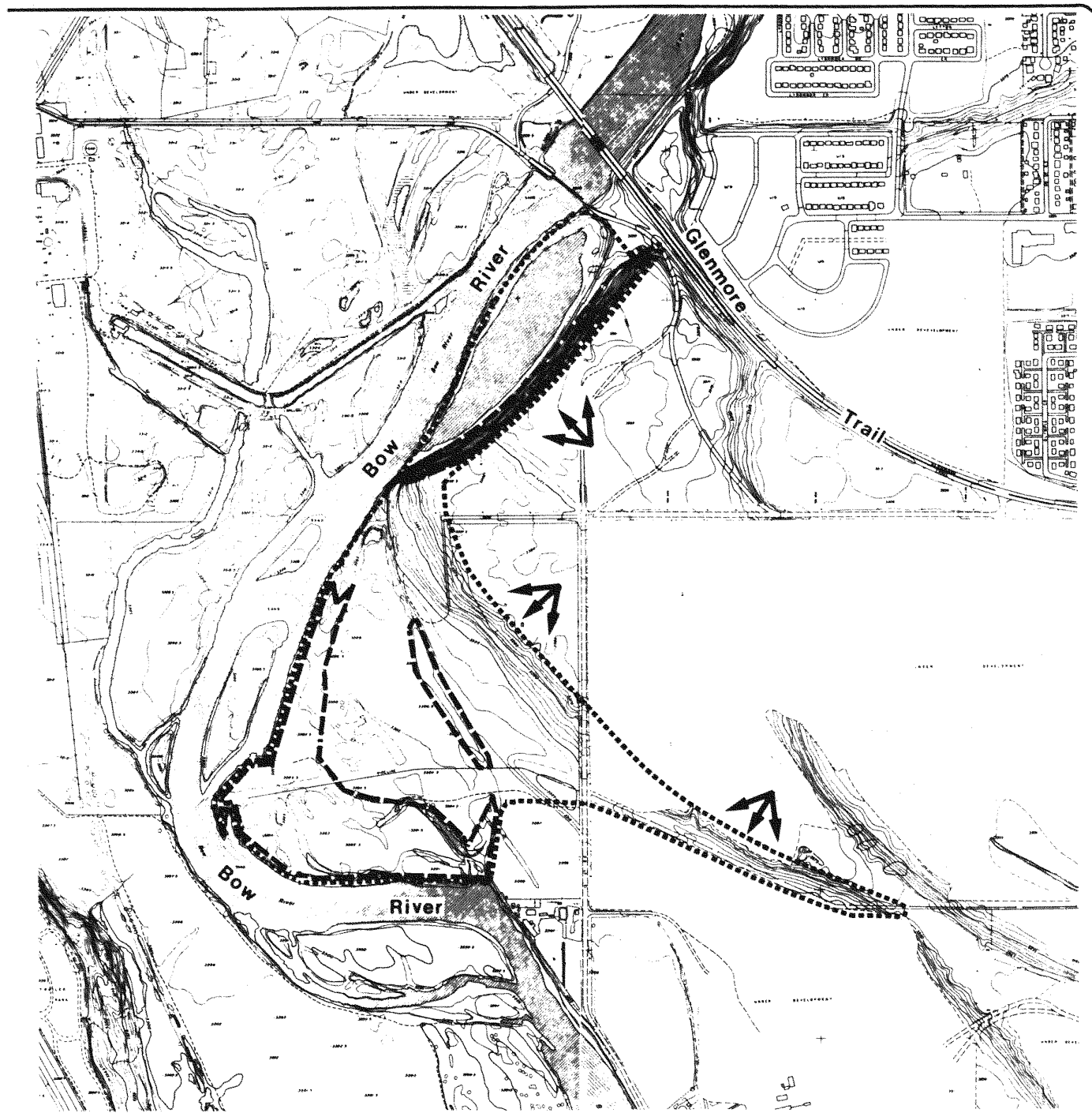
The Riverbend area is comprised of three basic landscape units: floodway and floodplain, escarpments, and upland plain.

The continuous north/south escarpment and land within the floodplain areas form the only topographic constraints to residential development. Part of this area is already taken out of development in the case of Carburn Park. The rest is taken out through environmental dedication in the case of lagoon and steep slope areas to the north and east.

Another smaller northwest to southeast escarpment is presently being carved away for backfilling operations in the rest of the Riverbend area.

##### **3.1.2 Vegetation**

The greater part of Riverbend has been so disturbed by the gravel extraction process, that native vegetation cover in large part does not exist. This condition applies generally to the area referred to as upland plains (above major escarpments). Any vegetation that does exist here consists of scattered grasses and a few low aspen scrub. The major escarpment towards the west of the area has in some parts been severely disturbed by gravel extraction operations. Those portions left in a natural state support only grasses to the south and a variety of sizes and types of vegetation in the north.



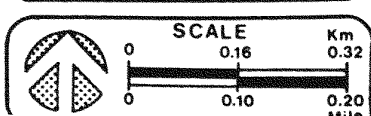
**RIVERBEND** MAP No 6

**TITLE AREA ENVIRONMENTAL FACTORS**

**LEGEND**

- Floodway & Escarpment Boundary Areas
- - - Areas Of Significant Tree Cover
- ↔ Views

**DATE: October, 1979**  
**Approved Copy**



The floodway and floodplain support the most significant cover in the area. This consists of various grasses and mature tree cover, predominately cottonwood. The existence of the significant tree cover in this area has been recognized through the City's purchase of Carburn Park and the recommendation of an environmental reserve dedication on the lagoon area to the north.

### **3.1.3 Views**

The topography of the area is such that significant views to and from it exist and must be taken into consideration in the design of the residential component of Riverbend as indicated in Map 6; these views are found mainly on the top of the major escarpment to the west of the area. These views are of both the mountains and of the wooded floodplain areas.

---

## **3.2 COMMUNITY SERVICES**

### **3.2.1 Decentralized City Services**

Riverbend will be about equidistant from two decentralized City service facilities, one being constructed in Forest Lawn to be operational by the end of 1979. The other is planned for the Anderson Road LRT Station to be opened when LRT service commences in 1981.

These facilities will accommodate many of the existing or proposed community and social services in their areas. In addition they will provide within the communities offices of such municipal services as taxes, licensing, assessment, electrical systems, planning, finance and parks.

### **3.2.2 Police Service**

The closest district office to Riverbend is the one at 61st Avenue and 2nd Street S.W. To the north of Riverbend, east of the Bow River, the nearest district office is located in Forest Lawn at 18th Avenue and 36th Street S.E.

Easy accessibility to areas served is critical, as is high visibility of a district office in the community. With projected population growth in the southeast, a district office may be required within five to ten years.

### **3.2.3 Fire Service**

Two fire stations would serve Riverbend until development to the south warrants one in that area. These are located at Ogden Road and 68th Avenue S.E. and a new station planned for 78th Avenue and 48th Street S.E. to be operational in 1982.

Accessibility to areas served is based on a one and one half mile service radius from the station and a five minute response time.

### **3.2.4 Library**

No library services are presently planned for Riverbend. The area will be serviced by the Bookmobile Program. Present plans include a branch library in the decentralized City service centre at the LRT Station at Anderson Road S.W. It should open in 1982 and will accommodate present branch facilities located at Southland and Elbow Drive S.W.

The projected population growth in the southeast may prompt the need for additional facilities in or closer to Riverbend. This service can easily be accommodated in leased space close to other community facilities to enhance accessibility to residents of the area.



---

### **3.2.5 Local Board of Health**

Health clinics accessible to residents of Riverbend are presently located at 82nd Avenue and Haddon Road S.W. and in Forest Lawn at 17th Avenue and 38th Street S.E.

There are no current plans for additional clinics in the southeast. It is anticipated that Riverbend can be serviced from existing facilities in the initial period of development. Further residential development in the southeast will prompt another look at provision of health services in the area.

### **3.2.6 Social Services**

Social services are currently located in the Forest Lawn area at 17th Avenue and 42nd Street S.E. Additional facilities are planned for the decentralized City services centre at the Anderson Road LRT Station.

School buildings and community facilities are considered suitable sites for these programs in newer areas, and in the event that school construction is delayed, development of community facilities to accommodate these services should be a priority.

Since most residents in the new area will likely be young families, programs for pre-school and teenage children will be required first.

#### 3.2.6.1 Pre-School

Day care facilities will be required. There should also be early childhood services providing programs and space for kindergarten and nursery schools.

#### 3.2.6.2 School and Teenage Programs

Recreation and athletic programs oriented to this age group should be provided in conjunction with the education facilities. A community facility should include a teenage drop-in centre when a need for this is demonstrated.

#### 3.2.6.3 Adult Programs

Social services required for this group include individual and family counselling, family life education programs, etc.

### 3.2.7 **Educational Facilities**

Schools in the Ogden area will be required to meet the immediate needs of that community for some time to come. All students residing in the Riverbend area will be bused out for the foreseeable future, and the Calgary Board of Education reserves the right to designate receiver schools.

### 3.3 OUTLINE PLAN REQUIREMENTS

Outline Plans must include the following information:

- (1) North Arrow.
- (2) Scale (no greater than 1" = 200', or metric equivalent).
- (3) Contours (Min. 5' interval or metric equivalent).
- (4) Key plan showing relationship of outline plan to the McKenzie Area Structure Plan, and previous phases.
- (5) Entire road system showing category and carriage way/right-of-way dimension.
- (6) All roads designed area to have curbs and gutters as a minimum standard, preferably curbs and sidewalks.
- (7) Identify land purchase option agreement areas.
- (8) All reserves and identification as to type (e.g. MR, MSR, SR and ER. Relevant school boards having an interest in MSR and SR sites, where this information is known). Also identify location of any proposed community association facility.

- |   |  |
|---|--|
| <p>(9) Gross area of outline plan in imperial and metric units; areas, percentages of public dedication based upon area after any ER and Land Purchase deductions to be shown on plan.</p> <p>(10) Proposed utility layout and any existing utility lines including gas lines, pipelines and overhead power lines, etc.</p> <p>(11) Proposed land uses including densities in p.p.a.</p> <p>(12) Pedestrian/bicycle systems.</p> <p>(13) Identify areas having specific features, including structures that may require individual attention in site design.</p> <p>(14) There is a need for a comprehensive report indicating the treatment of unique design features, the justification for specific land uses and an explanation of the subdivision concept and any other aspects requiring explanation. On D.C. sites an indication of reason for</p> | <p>D.C. and specific guidelines proposed. On all commercial sites provide information on the proposed size of primary and secondary trading areas and proposed amount of gross leaseable commercial area.</p> <p>(15) Data sheet separate from statistics which must be shown <u>ON THE PLAN</u>.</p> <p>(16) Identify stands of trees; water bodies and other unique features, e.g. unstable land.</p> <p>(17) Public facilities as identified in A.S.P. (e.g. firehalls, libraries, etc.).</p> <p>(18) Existing edge conditions/uses having an influence on the subdivision; include distance from features such as heavy industrial uses.</p> <p>(19) Setback provisions from pipelines and structures carrying, storing or regulating petroleum products.</p> <p>(20) Documentation of the possible future subdivision of abutting lands is required for analysis of commercial areas, joint use sites and transportation corridors.</p> |
|---|--|

- 
- (21) Indicate ownership on boundaries and identify.
  - (22) Prior to the approval of development for any portion of the area, an outline plan for the entire subdivision shall be submitted in accordance with the above provisions.
  - (23) In a situation where over or under dedication of reserves in any outline plan or ownership area occurs, arrangements to ensure the provision of the reserves in the appropriate location shall be made to the satisfaction of C.P.C. prior to the approval of any of the outline plans involved.
  - (24) Energy conservation is one of the criteria to be given serious consideration during the formulation of outline plans.

